

CIVIL AERONAUTICS BOARD

AIRCRAFT ACCIDENT REPORT

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NATIONAL AIRLINES, INC., DOUGLAS DC-7B, N 4891C,
IN THE GULF OF MEXICO, NOVEMBER 16, 1959

SYNOPSIS

National Airlines Flight 967, a DC-7B, N 4891C, crashed in the Gulf of Mexico while en route from Tampa, Florida, to New Orleans, Louisiana, on November 16, 1959, about 0055 c.s.t. All 42 occupants, 36 passengers and 6 crew members, were killed. There was no radio message of impending trouble.

A radar-observed descent was close to Lat. 29°13'N, Long. 88°40'W. This position is about 108 miles east-southeast of New Orleans, about 30 miles east of Pilottown, near the mouth of the Mississippi River, and very nearly on the planned course. Intensive sea and air searches resulted in finding nine floating bodies and a small amount of floating debris the following morning. None of this disclosed conclusive evidence as to the genesis of the accident. The main wreckage has not been located despite several well planned searches.

Because of the lack of physical evidence, the probable cause of this accident is unknown.

Investigation

National Airlines Flight 967 of November 15, 1959, was scheduled between Miami, Florida, and New Orleans, Louisiana, with a stop at Tampa, Florida. The aircraft was a DC-7, N 4891C, owned by Delta Air Lines and operated by National under an equipment interchange agreement. The National crew consisted of Captain Frank Eugene Todd, Copilot Dick Sheridan Beebee, Flight Engineer George Henry Clark, Jr., Stewardesses Patricia Ann Hires and Donna Jean Osburn, and additional crew member Jack Atkinson of the Federal Aviation Agency.

The flight departed Miami at 2212^{1/} and landed at Tampa at 2300. This segment of the flight was completely routine. At Tampa, some passengers deplaned and others boarded. The passenger manifest for Tampa-New Orleans listed 36 passengers. One of these was not aboard, although a final passenger count showed 36 passengers upon departure from Tampa. This matter will be detailed later in this report. Otherwise, the loading of the aircraft was normal with the center of gravity located within prescribed limits and the gross weight some 11,000 pounds under maximum permissible for takeoff.

Departure from Tampa, with the same crew, was at 2332. Adequate fuel, with reserve, was carried. The flight release Tampa-New Orleans was in accordance

^{1/} All times herein are Central Standard based on the 24-hour clock.

with the Civil Air Regulations and NAL procedures. Current weather reports and forecasts showed both destination and alternates to be and to remain above the approved minimums. No severe weather was forecast, anticipated or reported at flight altitudes over the route. Headwinds of about 15 to 20 knots at the filed flight altitude of 14,000 feet were forecast. The captain and the dispatcher discussed the flight and concurred in the release.

Air Route Traffic Control cleared Flight 967 over the established route across the Gulf from Tampa to New Orleans at 14,000 feet altitude. The flight was estimated to be at the Crab Intersection, a customary reporting point, at 0004. At 0005 the flight reported to Tampa company radio as over Crab at 0002 and estimated NLL, also a customary reporting point, at 0031, at 14,000 feet. At 0014, while between Crab and NLL, the flight received the 0600 New Orleans weather from National Flight 968, which was: "M700 overcast; 2-1/2 miles visibility; very light drizzle; fog; temperature 54; dewpoint 52; wind northeast 3; altimeter 30.14; ceiling ragged; obstruction lights out of service; see NOTAMS."

The flight's next radio contact was with FAA Pensacola radio at 0031 requesting clearance to New Orleans and reestimating NLL at 0035. At 0034 the flight reported over NLL at 0033 at 14,000 feet, estimating New Orleans at 0119. Pensacola replied by delivering a clearance to Flight 967, which stipulated that it was cleared from NLL direct to the MSY (New Orleans) omni via the 116-degree radial, and to descend and maintain 6,000 feet at the pilot's discretion. The flight accepted the clearance and stated it would remain at 14,000 feet a little longer.

At 0044 the flight again contacted FAA Pensacola and advised that it would change over to company frequency and would report to the company when leaving 14,000 feet and 7,000 feet. At this time the flight also contacted New Orleans company radio confirming the ATC clearance and reporting the weather to be CAVU with low solid (undercast) to the WNW. This is the last known radio contact with Flight 967. Repeated calls to it, starting at 0106 on company frequency, were not answered. A check by the company at this time showed that FAA, New Orleans Approach Control, and ARTC were also out of contact with Flight 967. Company calls to 967 continued without result for some time.

Two military radar stations had the flight under surveillance. The first, at Dauphin Island, near Mobile, Alabama, reported that Flight 967 continued on flight plan course during the entire time it was under their surveillance. Nothing unusual was observed and no other objects were observed in the vicinity of the flight which indicated to the station that any difficulty was being encountered. The point of fade from the scope was normal and within correlation limits.

The second radar station at Houma, Louisiana, picked up the flight at 0046, on track and at 14,000 feet altitude. For 3-1/2 to 4 minutes the flight continued on a normal track of approximately 296 degrees magnetic. It was then observed to turn right approximately 70 degrees and disappear from the scope at 0051 at Lat. 29°13'N. and Long. 88°40'W. The radar observer testified that this disappearance was characteristic of a target going below the scope's limits. Throughout this observation the radar scope indicated no other object.

The aircraft remained unreported. Search and rescue facilities were activated and the Coast Guard had search aircraft and surface craft in the suspec-

area before daylight. The position of $29^{\circ}13'N$ and $88^{\circ}40'W$ - at which the aircraft went off the military radar scope - was used as a focal point of search.

At Miami, National Airlines prepared one of its Convair aircraft, which left for the area at 0545 under the command of the company's chief pilot. This aircraft was flown to Tampa then out the NL route toward New Orleans to the position of $29^{\circ}13'N$, $88^{\circ}40'W$, at an altitude of 14,000 feet. This position was determined by VOR bearings taken from 14,000 feet altitude. Low frequency bearings were then taken on Grand Isle, on the New Orleans Range Station, and on the Mobile "H" facility, also from 14,000 feet altitude. (These bearings could be duplicated at low altitude; the VOR bearings could not be, due to line-of-sight limitations.)

The aircraft was then spiralled over the spot down to an altitude of 500 feet through a stratus deck with a base of approximately 800 feet, and tops of 1,200 to 1,400 feet. While spiralling, radio contact was established with Coast Guard aircraft although no direct contact was possible with Coast Guard surface vessels due to the lack of compatible radio frequencies. Accordingly, communications between Coast Guard surface vessels and the National Airlines Convair were relayed by Coast Guard aircraft. Coast Guard vessels suggested searching an area some distance to the southwest of the position $29^{\circ}13'N$, $88^{\circ}40'W$.

However, the search party aboard the National Convair had decided that the last known radar position ($29^{\circ}13'N$, $88^{\circ}40'W$) should be searched first. Accordingly, the aircraft was flown in a northerly direction for some five to ten miles from the point of spiral-down, whereupon floating debris was seen. This appeared to be bits of upholstery, sound deadening material, and white objects like sponge rubber pillows encased in plastic envelopes. While circling in this general area, several bodies were sighted as well as one liferaft that had been broken out of its case but was not inflated and appeared to be about three-fourths submerged.

Two more liferafts were soon seen in a similar condition. An oil slick estimated to be a mile long and possibly 400 yards in width ran in a north-south direction. It appeared that the oil was rising from the northernmost point of this oil slick. All floating debris and bodies were from one-half to two miles east and southeast of this oil slick.

While circling and observing, the National Convair called Coast Guard aircraft with continuous transmission, allowing the latter to home on the area. Some twelve to fifteen minutes later a Coast Guard aircraft arrived and dropped smoke markers. Shortly thereafter a Coast Guard helicopter arrived. The National plane was then spiralled in a climbing turn to 7,000 feet in order to obtain VOR bearings for this position.

These were determined, the aircraft were spiralled down to the same site, and the bearings were radioed to the Coast Guard and plotted on their charts as $29^{\circ}07'N$, and $88^{\circ}33'W$. This position is six miles south and about five miles east of the radar-observed descent.

Coast Guard and civil surface craft immediately searched the area exhaustively and retrieved everything sighted. There were nine bodies, a portion of a tenth body, five liferafts, five lifevests, and a highly diversified quantity of buoyant debris entirely from within the cabin and baggage compartments directly below it.

This consisted of fragmented bits of upholstery, soundproofing material, cabin linings, seat cushions and backs, metallic parts of seats attached to and buoyed by these cushions and backs, overhead racks and other light items not essential to the structural integrity of the aircraft. This material totaled possibly less than one percent of all such material within the fuselage. Some small quantity of clothing and other personal effects and several mail bags were also found. The personal effects consisted of shoes, clothing, parts of leather suitcases and other traveling paraphernalia.

Post-mortem examinations of the nine bodies, all of which were identified by fingerprints, indicated that all had received traumatic injuries. These injuries indicated that all nine persons had been seated at the time the aircraft struck the water. No seat belt abrasions were found. The inertia of the bodies was plainly downward and forward and the forces at impact were severe. None of these nine persons had been subjected to fire or smoke before death, as demonstrated by low carboxyhemoglobin levels in blood and tissue. Some of the bodies showed distinct evidence of burning on portions exposed above their waterlines.

A considerable amount of the floating debris also exhibited signs of burning but only above waterlines. Examination of the liferafts and lifevests indicated that they had not been used for their intended purposes or prepared for such use, and all damage had been accidental and random.

Witnesses

A careful search was made for witnesses. Fishermen in the Gulf who were questioned stated that they saw low-flying aircraft, but examination of their testimony indicates that they saw search aircraft shortly after the disaster and not the aircraft involved.

However, at Pilottown, Louisiana, the United States Coast Guard maintains a manned lookout tower for observing surface craft approaching and departing the port of New Orleans. The tower is about 30 miles west of the crash site. The Coastguardsman on duty saw an unusual light in the sky at an angle which he estimated as about 15 degrees above the horizontal and in the general direction of where N 4891C was lost and at about the time it was lost. He did not log the incident. His testimony indicates that the light was red or dark red, appearing suddenly, lasting a "couple of seconds," and then producing a vertical, white light which fell with a white trail. He estimates that the white trail took three or four seconds to go "straight down," and that the initial red flash was "almost as big as the sun." He heard no noise. At the time of these observations the stars were visible, the weather was hazy and there were no surface craft within his range of vision. Subsequent investigation has failed to reveal the use of any marine signal flash or pyrotechnic, which might have had a somewhat similar appearance, at the time and place.

Weather

Investigation disclosed no significant weather condition in the form of fronts, squall lines, thunderstorms, turbulence or icing affecting the route of flight.

The freezing level along the route was at about 14,000 feet and the winds at that altitude were generally from the northwest at 10-20 knots. Except for

the land areas and coastal waters from Mobile westward, skies were virtually clear and visibility excellent.

Low stratus and fog in the area from Mobile to New Orleans and at the New Orleans terminal would have caused the destination to be below limits at the estimated time of arrival. However, there was ample fuel to have proceeded to the flight's planned alternate or to Dallas, the next en route stop.

Water temperatures in the vicinity of the crash were 70 degrees or more. The sea was practically calm with waves about 1-1/2 feet high moving from a northerly direction with a period of about five seconds.

Investigation disproved the possibility of collision with another aircraft, either civil or military, and there were no missiles or rockets in flight at the time and place.

Maintenance and Crew Competence

Investigation failed to reveal any item of maintenance of either the aircraft or its powerplants which could be significantly related to the accident. Crew qualifications and experience were amply high in all respects and an investigation disclosed no irregularity in this connection.

No suggestion of unfamiliarity by National crews of Delta interchange aircraft was found during the investigation.

Subsequent Search

The Board obtained search assistance from the United States Navy. The Navy utilized several vessels equipped with advanced apparatus and manned with skilled specialists. Unfortunately, these searches were not successful.

The U.S.S. ASSURANCE sailed on November 19, 1959, for position 39°07'N - 88°33'W relieving the Coast Guard Cutter NIKE, which had been standing by. Searching continued through November 23. The U.S.S. PENGUIN assisted on November 24 and on the following day made sonar contacts at position 29°16.4'N, 88°36.7'W. This position was buoyed and two dives were made in depths of 210 feet. The search was resumed on November 26, 1959, to the south and west of the previous area based upon drift studies of recovered debris. A strong sharp contact, definitely bottom and metallic, was made at position 29°11.6'N, 88°38.2'W at a depth of 245 feet. Divers established that the contact was a sunken ship.

The United States Fish and Wild Life, M/V OREGON, searched for 24 hours on December 14 and 15, 1959, dragging a 35 foot wide net over the bottom at a position centered around Lat. 29°10'N, and Long. 88°39'W. From January 9, 1960 to January 15, 1960, the U.S.S. VIGOR searched, using Navy sonar. About 72 square miles south of the area originally covered in November was swept and bottom contact approximately 110 feet long was made at Lat. 29°12.3'N, Long. 88°37.3'W. Grapples were used and a variety of objects were recovered but none could be related to the aircraft.

From January 27 through 30, 1960, and from February 2 through 5, 1960, the VIGOR and PENGUIN made four dives on the bottom sonar contact obtained by the VIGOR on January 10, 1960. During this period an underwater television camera was

lowered twice on the contact from the VIGOR but only marine life was observed. From March 3 through 13, 1960, the U.S.S. ASSURANCE and the U.S.S. BITTERN searched separate areas using Navy sonar. Many sonar contacts were obtained by both ships but all were evaluated as marine life. The BITTERN obtained four separate bottom contacts at Lat. 29°18.5'N, Long. 88°39'W on March 11, 1960, but the XN3 TV camera revealed it to be marine wreckage. From March 16 through 25, 1960, the VITAL and the BITTERN continued searching in other areas and many bottom contacts were obtained but none proved to be aircraft wreckage.

Several months later, on November 7, 1960, a commercial organization was engaged to conduct a one-month search using techniques proven effective in prospecting for underwater oil structures. With the time and funds available it was possible to cover only 29.75 square miles of an area selected after an analysis of wind and current factors and the results of all previous searches. This search was also unsuccessful.

Charts used during the several searches, with search areas well delineated, were coordinated within the various agencies to preclude duplicative and omission effort. These charts have been preserved for possible future use.

Investigation has disclosed certain details in regard to a last minute boarding of the aircraft at Tampa by a person using another person's ticket. Pertinent details are:

William Allen Taylor, of Tampa, Florida, disappeared November 15, 1959, after telephoning his employer he would be late for work. A few moments before the departure of Flight 967 from Tampa, Taylor purchased a flight insurance policy in the amount of \$37,500 from a coin-operated machine at Tampa International Airport making his son the beneficiary and showing his destination as Dallas, Texas. National Airlines records do not show a ticket issued in his name and he was not carried on their records as a passenger on Flight 967. Taylor's body was not among those recovered.

Robert Vernon Spears, of Dallas, Texas, was listed as a passenger on Flight 967. He was subsequently apprehended by Federal authorities in Phoenix, Arizona, for having unlawful possession of Mr. Taylor's vehicle.

The Board, with the aid of the Federal Bureau of Investigation, has thoroughly investigated Mr. Spears' activities in order to determine whether they might have had a bearing upon the accident. We have been unable to find any such relationship.

Analysis

Analysis of this accident must rest almost entirely on circumstantial evidence for the aircraft's wreckage still lies on the bottom of the Gulf. There is little or no physical evidence upon which to explain this accident.

The aircraft was airworthy at the time of departure, the crew was competent, weather conditions were good, and when disaster struck, the flight was very close to being both on course and on schedule. No operational or maintenance item was found which can reasonably be linked to this accident.

It may safely be concluded that there was no warning of the disaster. This is evident by the lack of any unusual radio messages.

As has been detailed, the fire marks on bodies and on debris were of the type caused exclusively by a flash surface fire, probably both hot and brief, upon impact with the water.

Probable Cause

Because of the lack of physical evidence, the probable cause of this accident is unknown.

BY THE CIVIL AERONAUTICS BOARD:

/s/ ALAN S. BOYD
Chairman

/s/ ROBERT T. MURPHY
Vice Chairman

/s/ CHAN GURNEY
Member

. /s/ G. JOSEPH MINETTI
Member

/s/ WHITNEY GILLILLAND
Member

S U P P L E M E N T A L D A T A

Investigation and Hearing

The Board's Investigator-in-Charge at Miami, Florida, the regional office, was notified immediately when it was established that Flight 967 was missing. An investigation was immediately initiated in accordance with the provisions of Section 702(a)(2) of the Federal Aviation Act of 1958. A public hearing was ordered by the Board and held at the Empress Hotel, Miami Beach, Florida, on January 15 and 16, 1960.

Air Carrier

National Airlines, Inc., is a Florida corporation with its main office at Miami, Florida. The company operates as a scheduled air carrier under a currently effective certificate of public convenience and necessity issued by the Civil Aeronautics Board and an operating certificate issued by the Federal Aviation Agency. These certificates authorize the transportation by air of persons, property and mail between various points in the United States including Miami, Florida; Tampa, Florida; and New Orleans, Louisiana.

Flight Personnel

Captain Frank Eugene Todd, age 43, was employed by National Airlines in 1951. His total piloting time was 14,700 hours, of which 400 hours had been in DC-7 aircraft. He held all pertinent piloting certification issued by the FAA, was current on his physical examination; had had adequate rest before the subject flight and was also current on his line and instrument checks.

Copilot Dick Sheridan Beebee, age 34, was hired by National in February 1953, and was promoted to captain in January 1957. He had a total piloting time of 8,710 hours, of which 400 had been in DC-7 aircraft. Mr. Beebee held all requisite FAA piloting certification and ratings and was current on his physical examination and his instrument check.

Flight Engineer George Henry Clark, Jr., age 31, was employed by National as an apprentice mechanic in July 1944. In March 1951, he was promoted to mechanic and in December 1952, to flight engineer. His total flying time was 6,585 hours. Mr. Clark held all requisite FAA certifications and additionally held a commercial pilot's certificate.

Mr. Jack Atkinson of the FAA was listed as an additional crew member. His aeronautical qualifications and certifications will not be detailed as they are not germane to the accident.

Both stewardesses, Patricia Ann Hires and Donna Jean Osburn, had been satisfactorily schooled in their duties and in emergency procedures. Both had had adequate rest periods prior to the subject flight.

The Aircraft

The aircraft was a Douglas DC-7B owned by Delta Air Lines, Inc., and operated by National under an approved equipment interchange agreement. This aircraft was serial number 45355 and it had a total operational time of 6,578 hours. Records indicate that all maintenance had been satisfactory and was current. The engines were Wright Aeronautical Company's Model R-3350. Their maintenance had been current and all four had had time since overhaul well within the prescribed limit. Propellers were models 34E60-345 with 6921D-3 blades. All hub and blade maintenance had been satisfactory and was current.